

Translation

PATENT COOPERATION TREATY

PCT/JP2004/011806



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference JSONY-600PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2004/011806	International filing date (day/month/year) 11 August 2004 (11.08.2004)	Priority date (day/month/year) 19 August 2003 (19.08.2003)
International Patent Classification (IPC) or national classification and IPC H01L 21/822, 23/52, 25/04, 25/18, 27/04		
Applicant SONY CORPORATION		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☒ Box No. VIII Certain observations on the international application

Date of submission of the demand 16 March 2005 (16.03.2005)	Date of completion of this report 07 June 2005 (07.06.2005)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

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International application No.

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ The international application as originally filed/furnished
- ☒ the description:
- pages _____ 1-36 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ 12 _____, as originally filed/furnished
- pages* _____ 4-11 _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages _____ 1-8 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☒ the claims, Nos. _____ 1-3,13 _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	4-6, 8-12	YES
	Claims	7	NO
Inventive step (IS)	Claims	11	YES
	Claims	4-10, 12	NO
Industrial applicability (IA)	Claims	4-12	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

- Document 1: JP, 2000-332202, A (NEC Corporation)
November 30, 2000 (11.30.00), Paragraph 0014, Fig. 1
- Document 2: JP, 2003-004808, A (NEC Corporation)
January 8, 2003 (01.08.03), Paragraphs 0029-0032, Fig. 9
- Document 3: JP, 2003-124331, A (Toshiba Corporation)
April 25, 2003 (04.25.03), Full text, all drawings
- Document 4: JP, 2002-033361, A (Mitsumi Electric Co., Ltd.)
January 31, 2002 (01.31.02), Paragraphs 0016-0018, Fig. 2 &
US, 2003/0030129, A1, Paragraphs 0033-0035
Fig. 2
- Document 5: JP, 06-224373, A (Toshiba Corporation)
August 12, 1994 (08.12.94), Full text, all drawings &
US, 5587598, A, Full text, all drawings
- Document 6: JP, 08-167703, A (Matsushita Electric Industrial Co., Ltd.)
June 25, 1996 (06.25.96), Full text, all drawings &
EP, 707316, A2, Full text, all drawings
- Document 7: JP, 2003-121504, A (Seiko Epson Corporation)
April 23, 2003 (04.23.03), Paragraph 0007

The invention relating to claim 4 does not appear to involve an inventive step based on document 1 cited in the ISR and newly cited documents 2-4. Document 2 (paragraphs 0029-0032 and Fig. 9) discloses a technology of electrically connecting an external Pin to inter-chip wiring used for input and output during a test; therefore, using the technology disclosed in document 2 for independently testing a chip in document 1 would be easy for a party skilled in the art. Also, forming a protective device with respect to an I/O of an internal circuit to protect the internal circuit from overcurrent as described in document 3 or providing a protective device for a test terminal as described in document 4 (paragraphs 0016-0018 and Fig. 2), are merely well-known technologies.

The invention relating to claim 5 does not appear to involve an inventive step based on documents 1-5. The diode device described in document 1 is for protecting the device from plasma damages at the time of forming wiring, and the protective device described in documents 3 and 4 is for protecting the device from overcurrent such as surge; therefore, this examination finds that the capabilities of the protective devices of document 1, documents 3 and 4 differ from one other.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 12 describes "said external connection circuit"; however, claim 10, which cites claim 12, does not describe a corresponding "external connection circuit." The corresponding relationships are unclear.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of Box V.2:

The invention relating to claim 6 does not appear to involve an inventive step based on documents 1-4 and newly cited document 5. Document 5 discloses a technology such that after forming wiring, a protective device protecting the device from plasma damages at the time of forming wiring is disconnected; therefore, employing the technology disclosed in document 5 to documents 1-4 would be easy for a party skilled in the art.

The invention relating to claim 7 does not appear to be novel or involve an inventive step based on document 1. The diode device described in document 1 is for protecting the device from plasma damages caused by forming wiring; therefore, this examination finds that it is a state in which the diode device is functioned at the time of forming wiring in document 1.

The inventions relating to claims 8 and 9 do not appear to involve an inventive step based on document 1 and document 6 cited in the ISR. As described in document 6, performing inter-chip connection at a protruding electrode is a well-known art; therefore, employing the well-known art in document 1 would be easy for a party skilled in the art.

The inventions relating to claims 10 and 12 do not appear to involve an inventive step based on documents 1 and 6 and newly cited document 7. As described in document 7 (paragraph 0007), performing inspection prior to a connection step is a well-known art; therefore, employing the well-known art in documents 1 and 6 would be easy for a party skilled in the art.

The invention relating to claims 11 is not described in any of the documents cited in the ISR; nor is this obvious to a party skilled in the art.